

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 20194 - L2 Version 1
Chandra X-Ray Center

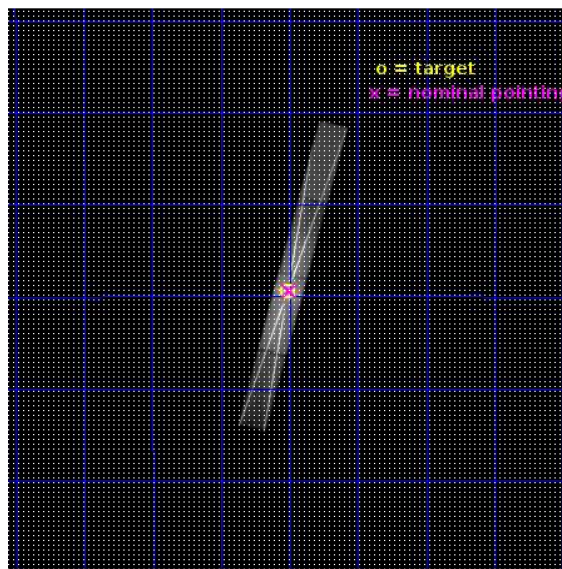
L2 Processing Date : May 30 2019

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1 Front

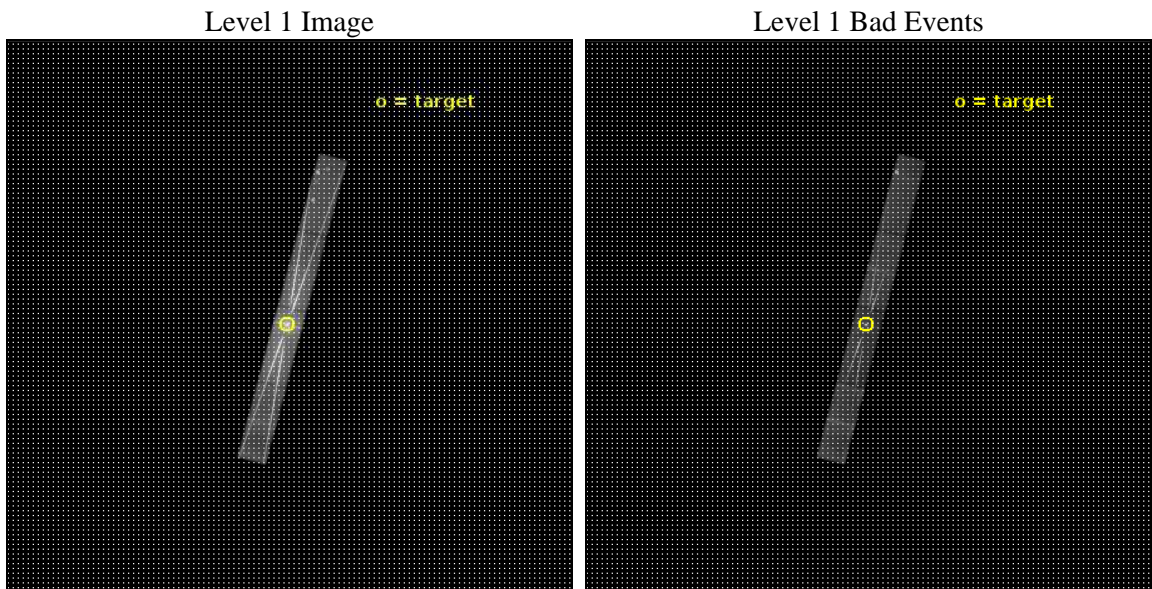
seq_num	401921	Sequence number
obs_id	20194	Observation id
title	Winds and jets in GX 13+1: a multi-wavelength campaign	Proposal ti
observer	Jeroen Homan	Principal investigator
object	GX 13+1	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	273.6295	Observer's specified target RA [deg]
dec_targ	-17.157208	Observer's specified target Dec [deg]
ra_nom	273.62517189984	Nominal RA [deg]
dec_nom	-17.156013780273	Nominal Dec [deg]
roll_nom	104.45179497764	Nominal Roll [deg]
revision	1	Processing version of data
ontime	25402.509889483	Sum of GTIs [s]
livetime	24562.473302537	Livetime [s]
ontime5	25402.46884954	Sum of GTIs [s]
ontime6	25402.427809477	Sum of GTIs [s]
ontime7	25402.509889483	Sum of GTIs [s]
ontime8	25402.386769533	Sum of GTIs [s]
l2events	2456983	Number of level 2 events



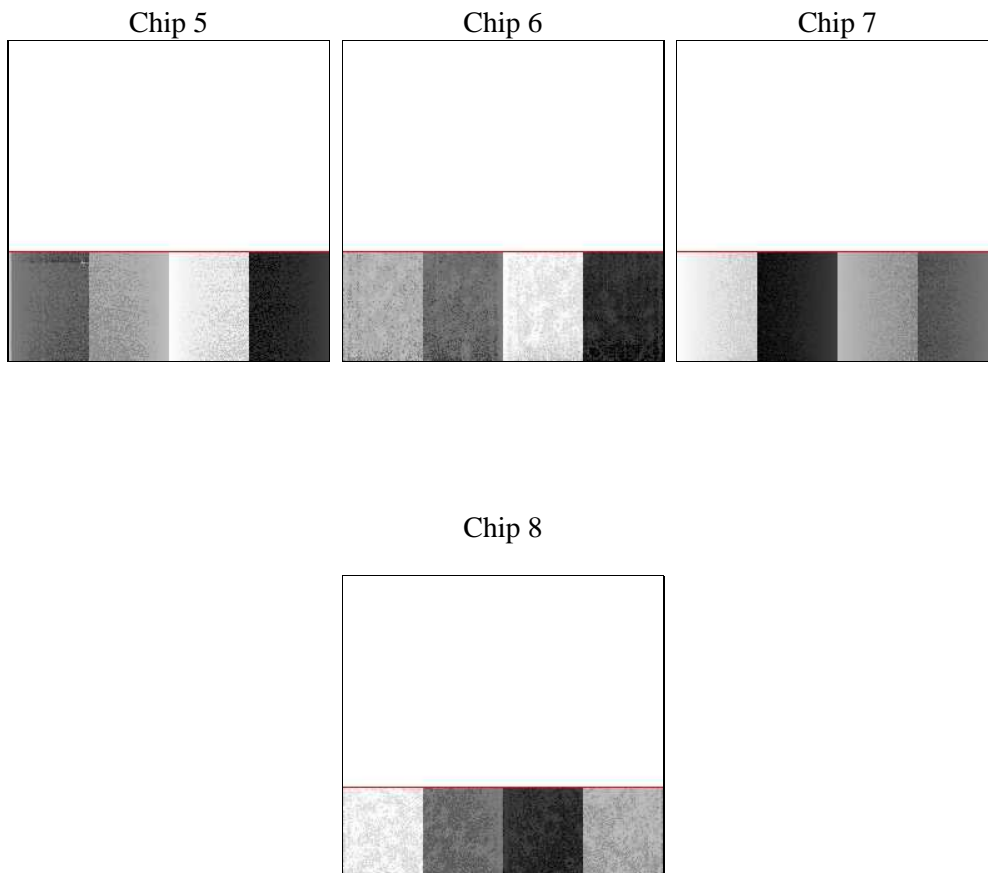
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	25322.458000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	25402.509889483	Sum of GTIs [s]
caldsver	4.8.3	 	ontime5	25402.46884954	Sum of GTIs [s]
date	2019-05-30T20:37:21	Date and time of file creation	ontime6	25402.427809477	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	25402.509889483	Sum of GTIs [s]
			ontime8	25402.386769533	Sum of GTIs [s]
			l1events	2909830	Number of level 1 events
			tgmethod	FINDZO	Method used to create src1a file
			zo_pos	(4066.80, 4087.57)	src1a sky pixel position
			zo_pos_tgd	(4066.65, 4087.62)	src1a sky pixel position via todetect

2.1.4 Events

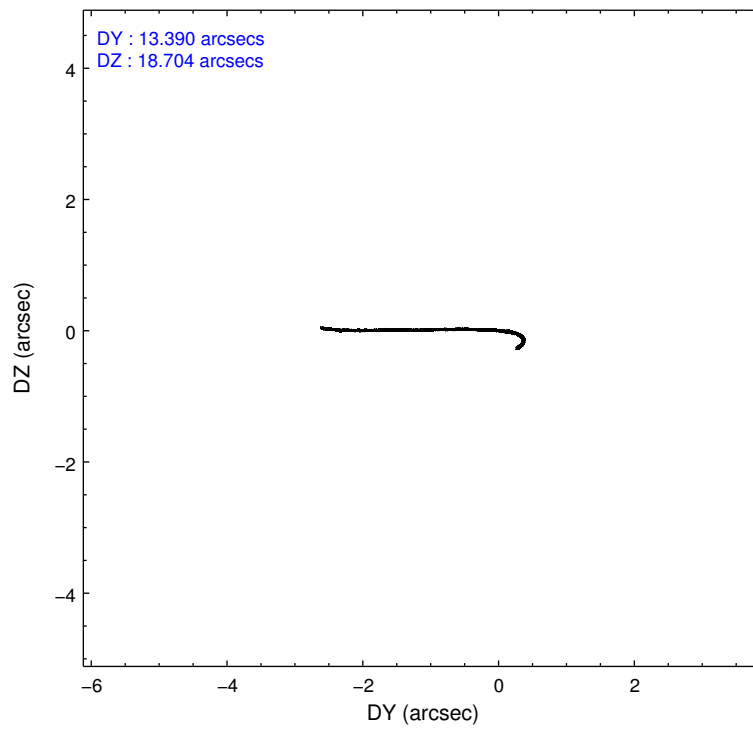
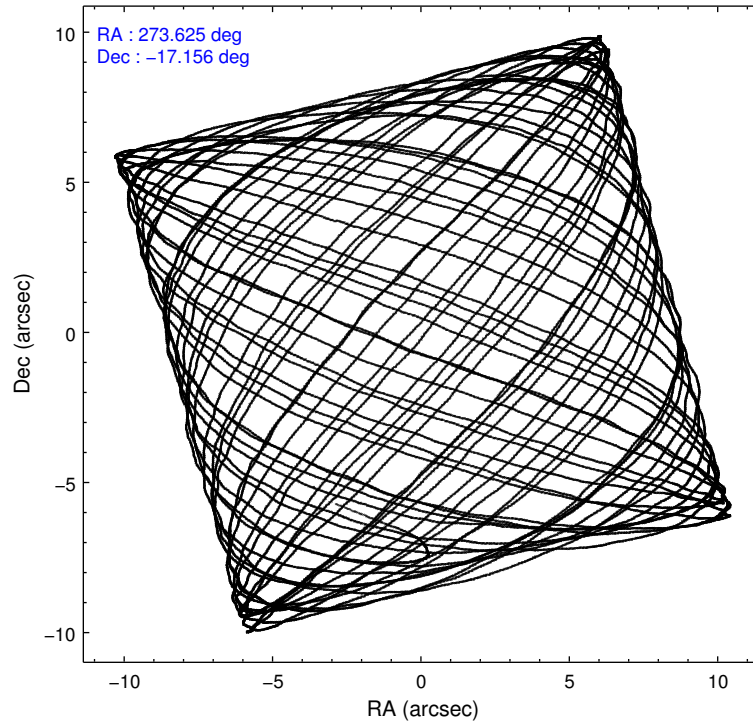
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	205176	973426	1461383	269845
rejected events	68744	94823	112181	70287
rejected %	33%	9%	7%	26%

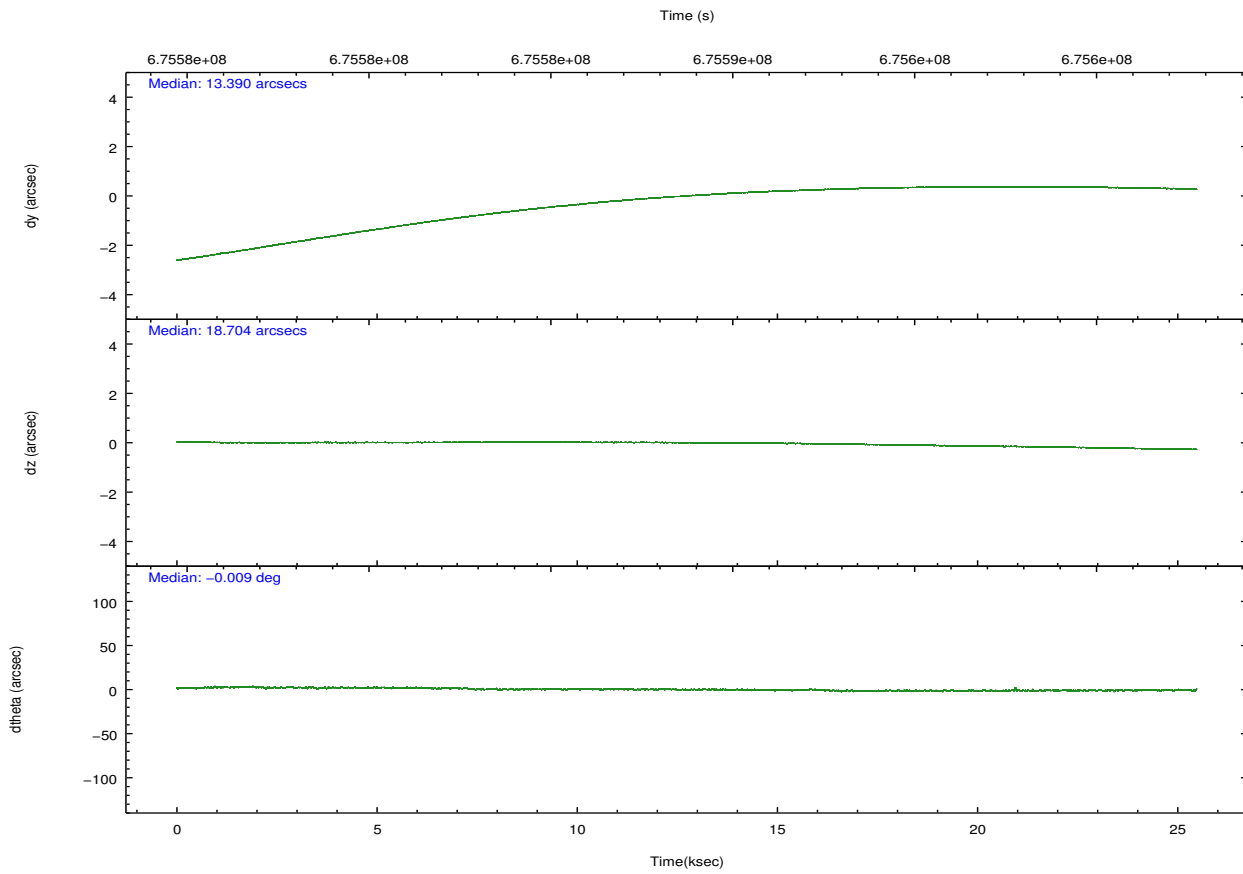
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	36683	618187	242778	140767
	17%	63%	16%	52%
grade 1 events	257	10499	5349	722
	0%	1%	0%	0%
grade 2 events	38234	122896	326087	26203
	18%	12%	22%	9%
grade 3 events	10591	42492	143348	9851
	5%	4%	9%	3%
grade 4 events	8316	42058	141881	9347
	4%	4%	9%	3%
grade 5 events	17095	12413	33882	5108
	8%	1%	2%	1%
grade 6 events	42614	53017	495173	13398
	20%	5%	33%	4%
grade 7 events	51386	71864	72885	64449
	25%	7%	4%	23%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5678	ACIS-5678	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	273.645564	273.6251718998412	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-17.175335	-17.15601378027344	Subarray start row	1	1
[deg] Pointing Roll	104.301212	104.4517949776391	Subarray row count	350	350
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	1.2
[mm] SIM translation stage pos	-182.132523	-182.1370004450064			
[mm] SIM translation stage offset	-8	-7.995522138001405			
[s] Observation start time (MET)	675576139.184000	675575139.69546			
Observation start date	2019-05-30T04:01:10	2019-05-30T03:45:39			
[s] Observation end time (MET)	675601461.184000	675602954.0971299			
Observation end date	2019-05-30T11:03:12	2019-05-30T11:29:14			
Read mode	TIMED	TIMED			

2.3 Aspect





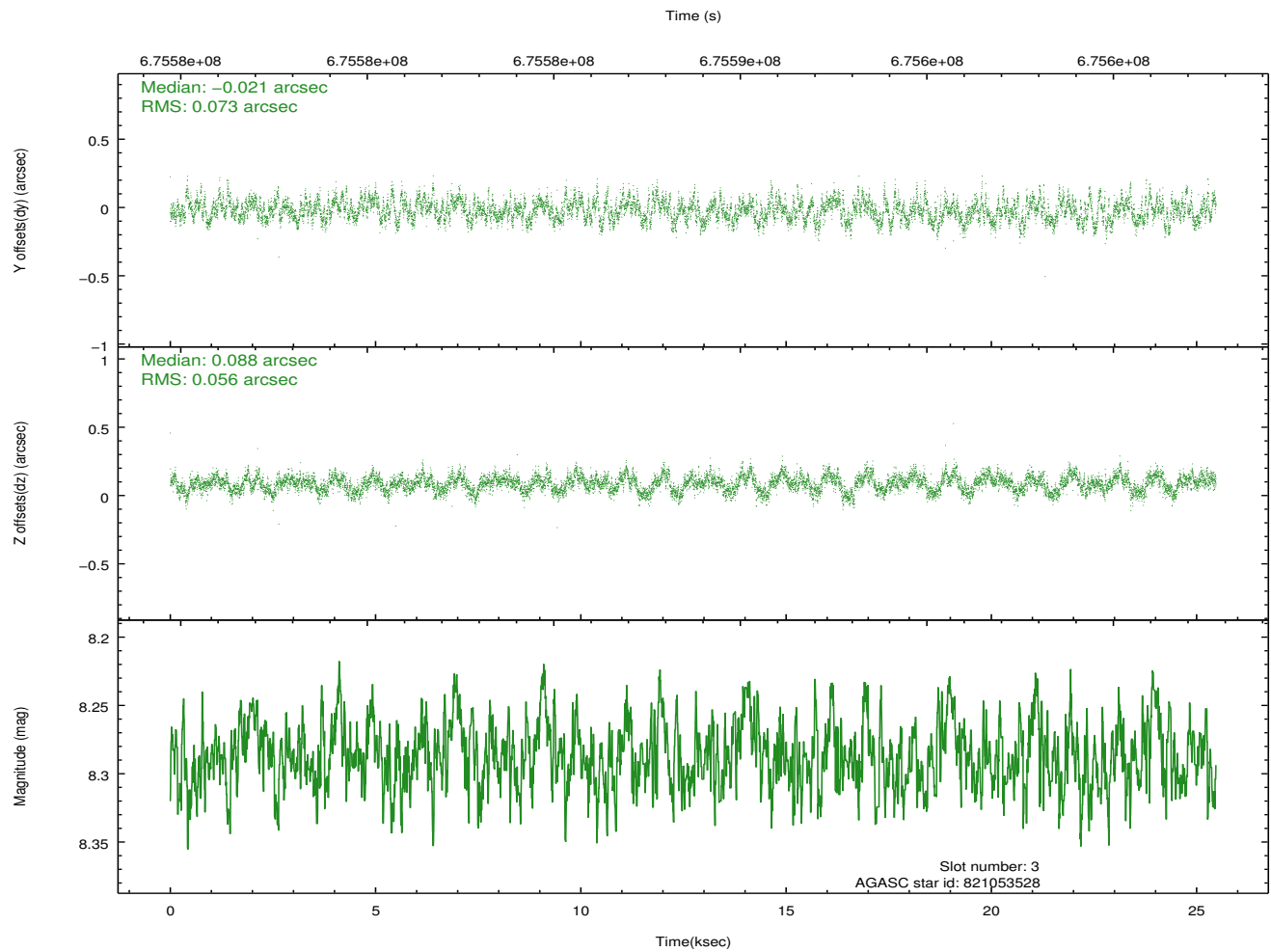
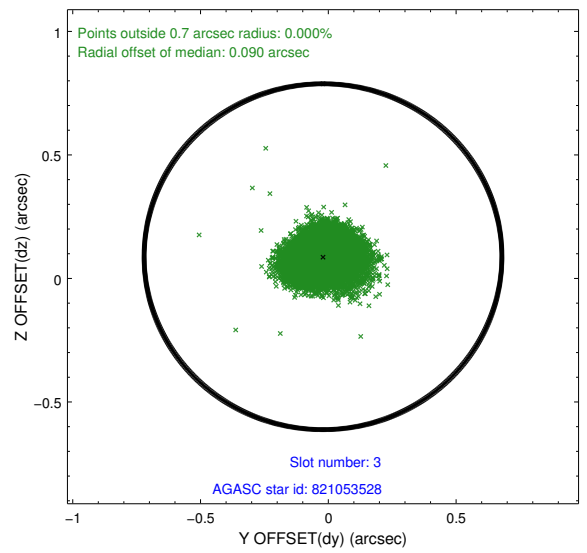
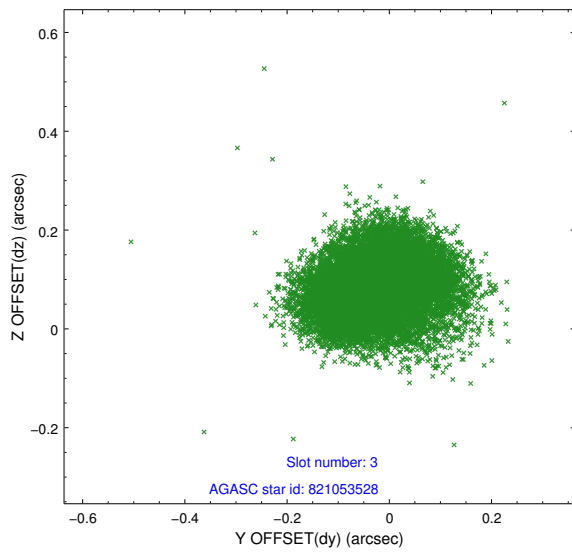
Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-1	7.12	6211	1.000	0.139	0.011	0.024	0.035	0.000000	0.000000	931.00	-1900
1	FID		ACIS-S-5	7.15	6214	1.000	-0.435	0.046	0.034	0.047	0.000000	0.000000	-1818.64	-3
2	FID		ACIS-S-6	7.31	6213	1.000	0.278	-0.045	0.023	0.030	0.000000	0.000000	396.41	640
3	GUIDE	used	821053528	8.29	12420	1.000	-0.021	0.088	0.100	0.155	273.625019	-16.498449	2378.53	-532
4	GUIDE	used	821561440	7.91	12425	1.000	0.568	0.564	0.108	0.168	273.991252	-17.607934	-1802.55	-763
5	GUIDE	used	821570064	6.62	12427	1.000	-0.214	-0.355	0.060	0.098	273.185111	-17.414521	-445.86	1745
6	GUIDE	used	821036968	7.04	12426	1.000	-0.600	-0.453	0.091	0.149	273.201148	-16.575658	2468.46	952
7	GUIDE	used	821035568	7.89	12422	1.000	0.265	0.154	0.097	0.151	273.834124	-16.831485	1038.91	-935

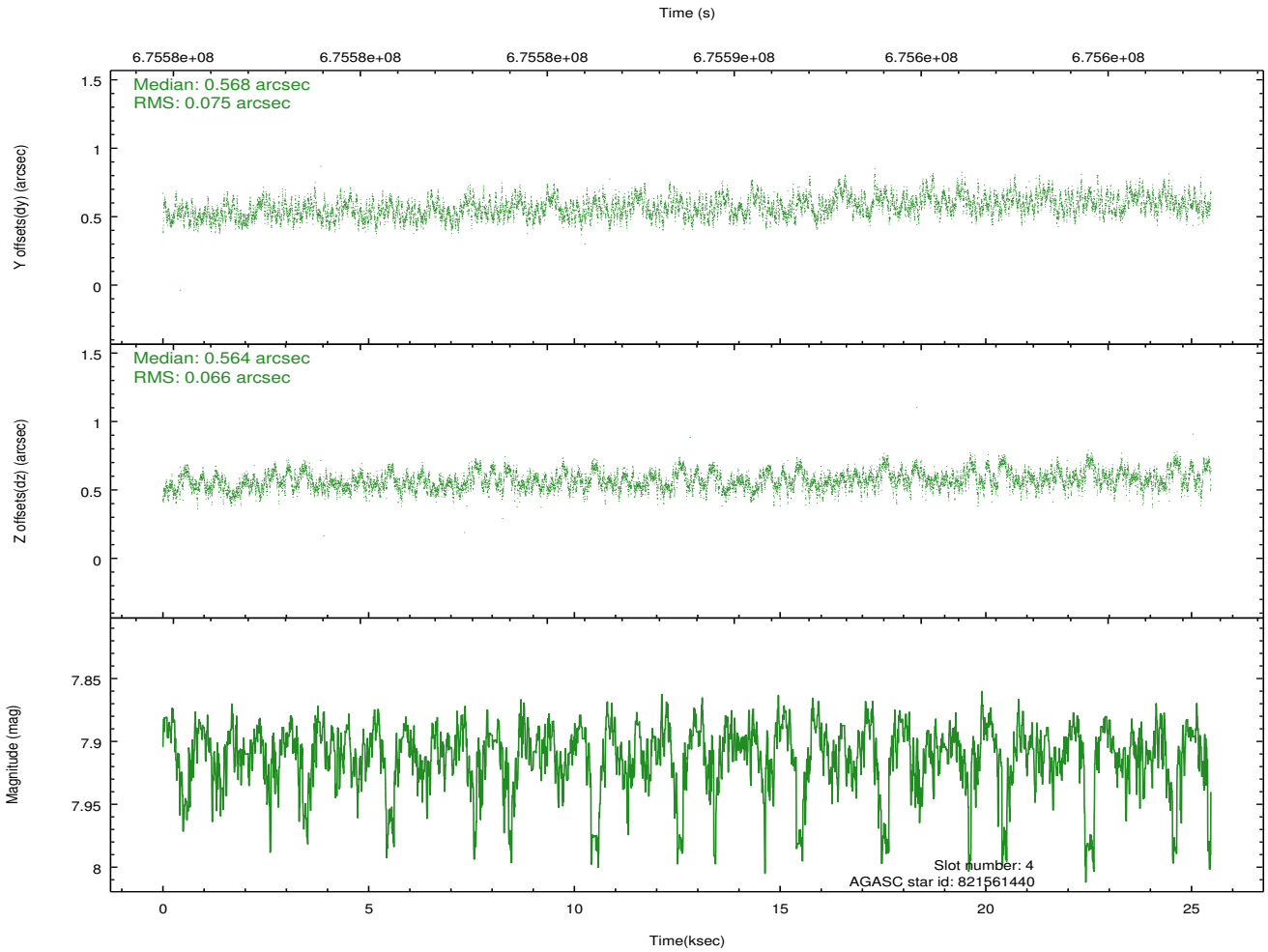
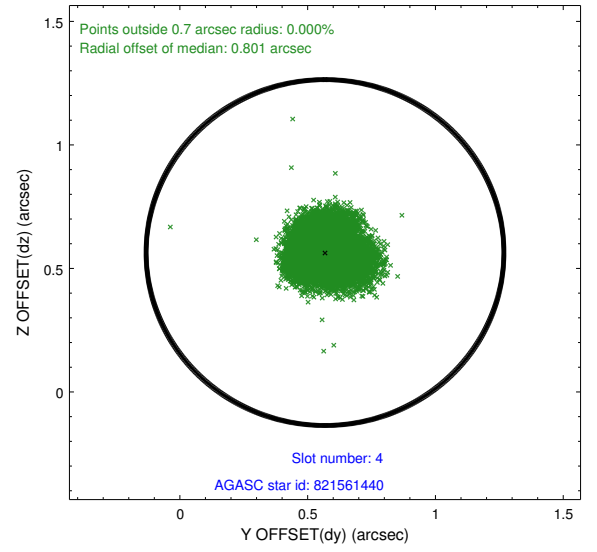
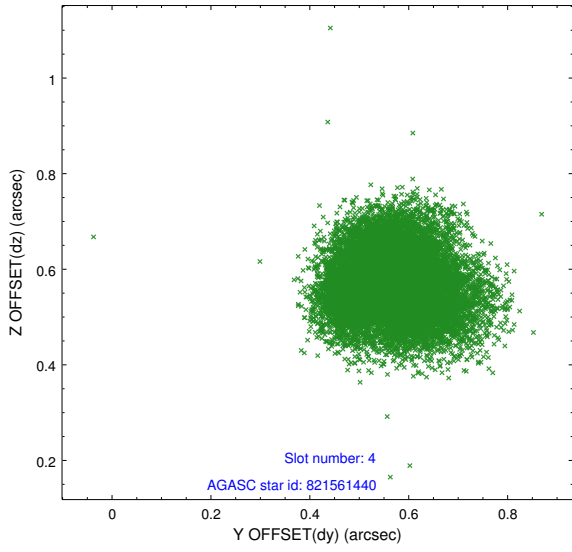
∞

2.4 Star Slots

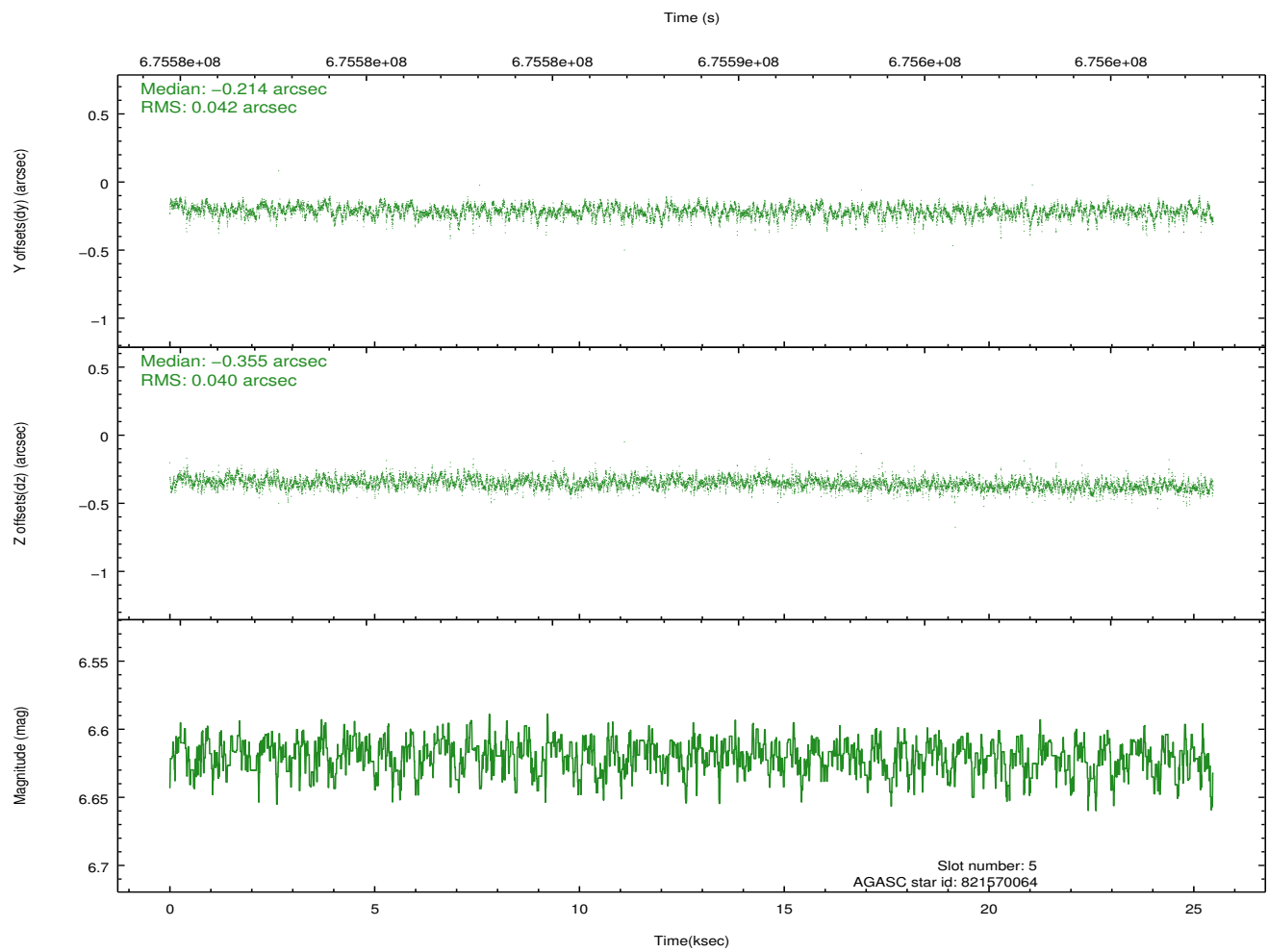
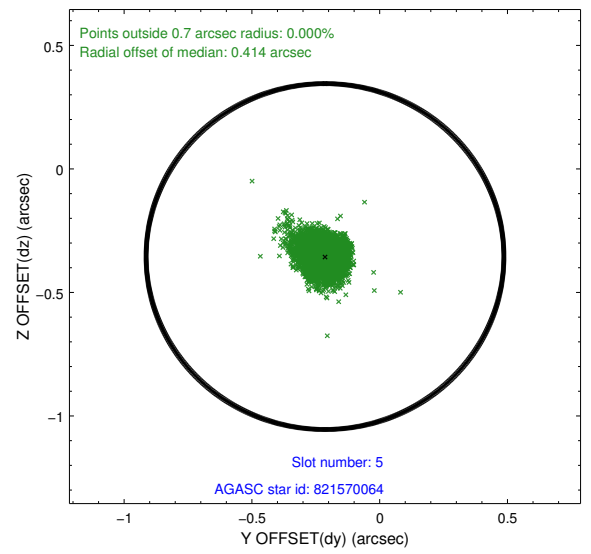
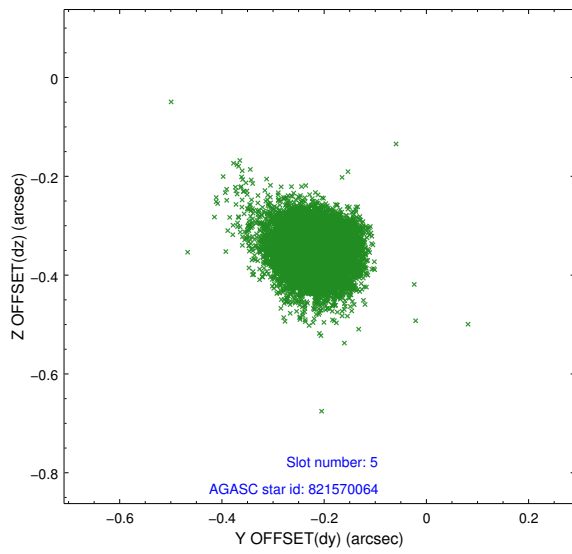
2.4.1 Slot 3



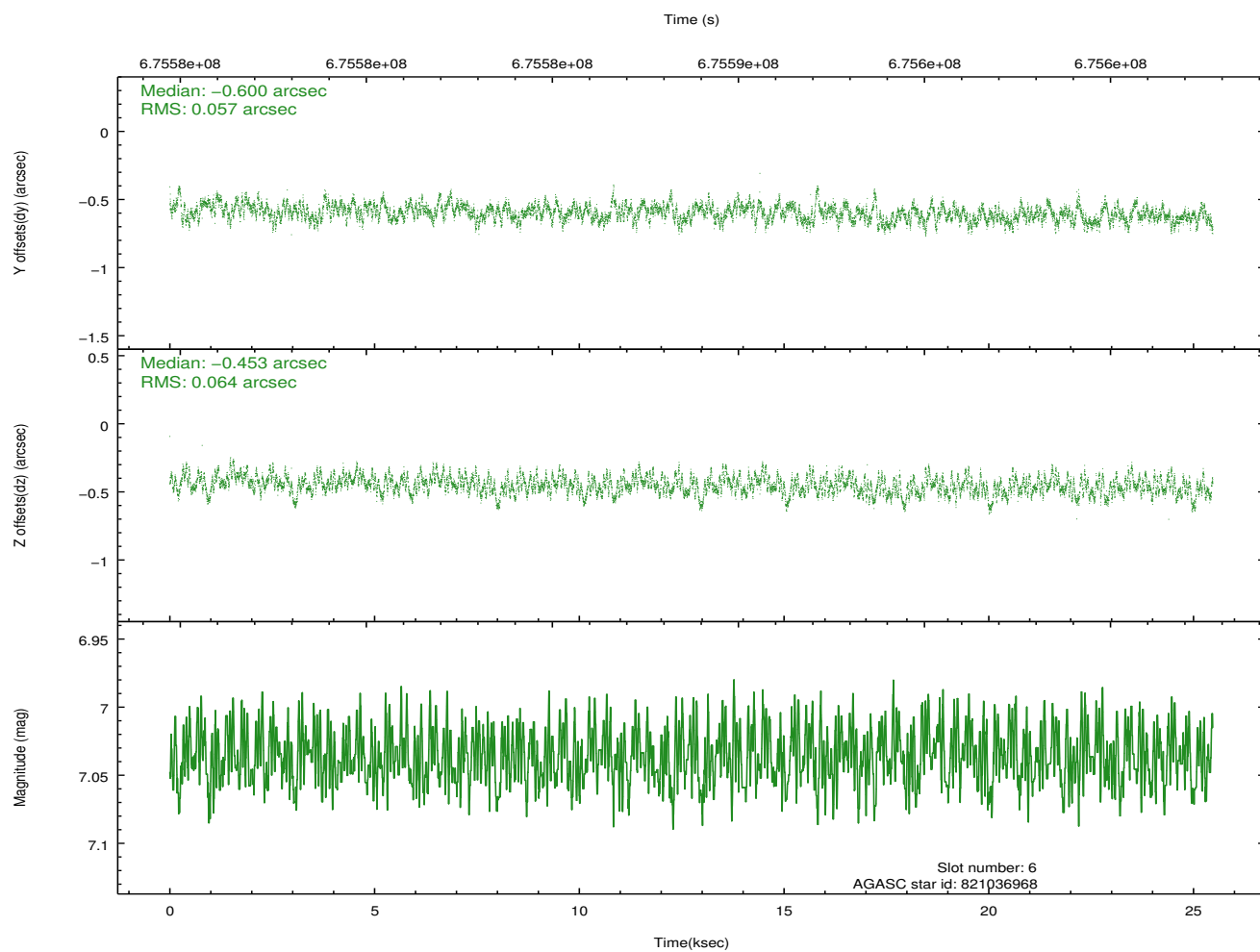
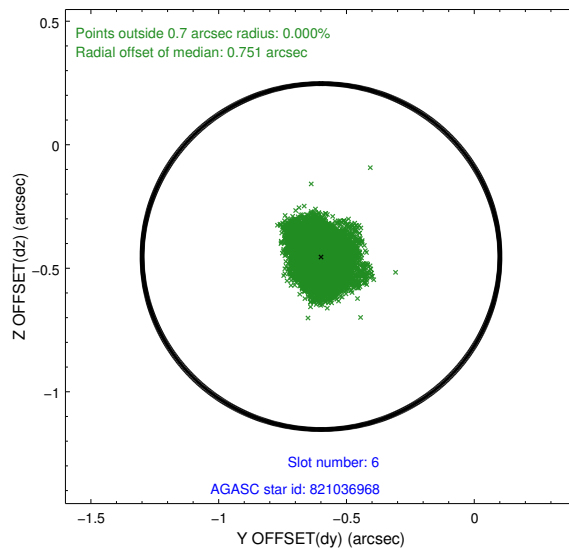
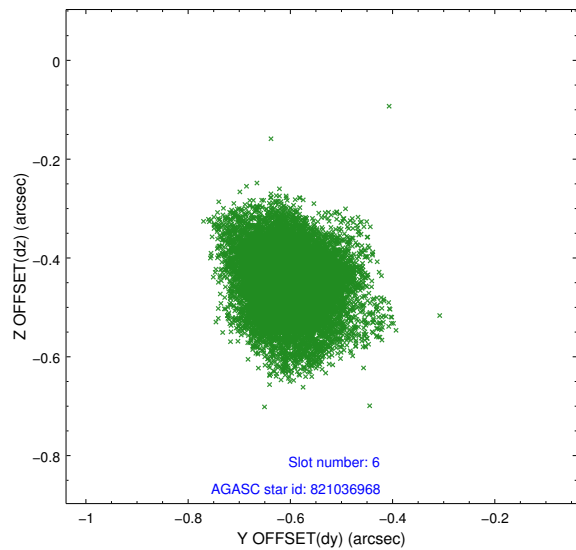
2.4.2 Slot 4



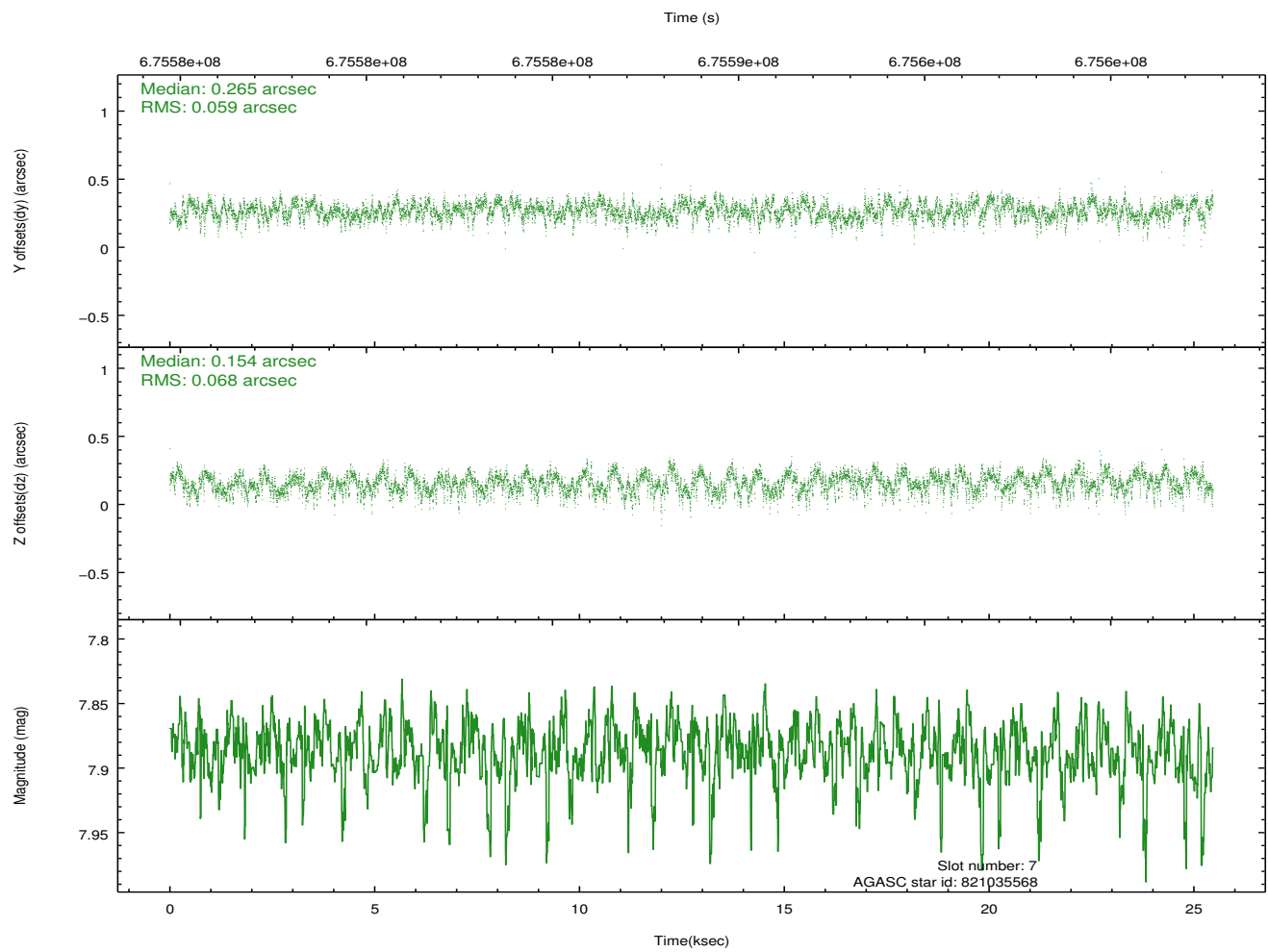
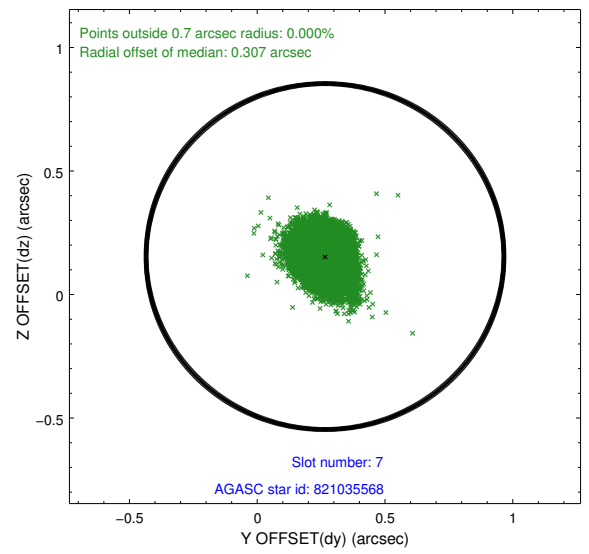
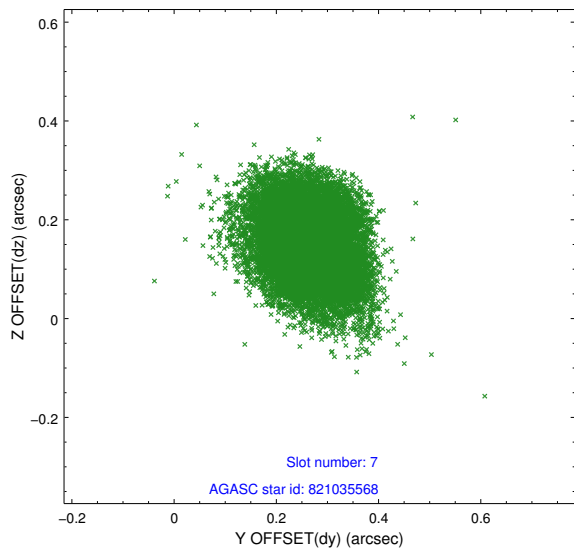
2.4.3 Slot 5



2.4.4 Slot 6

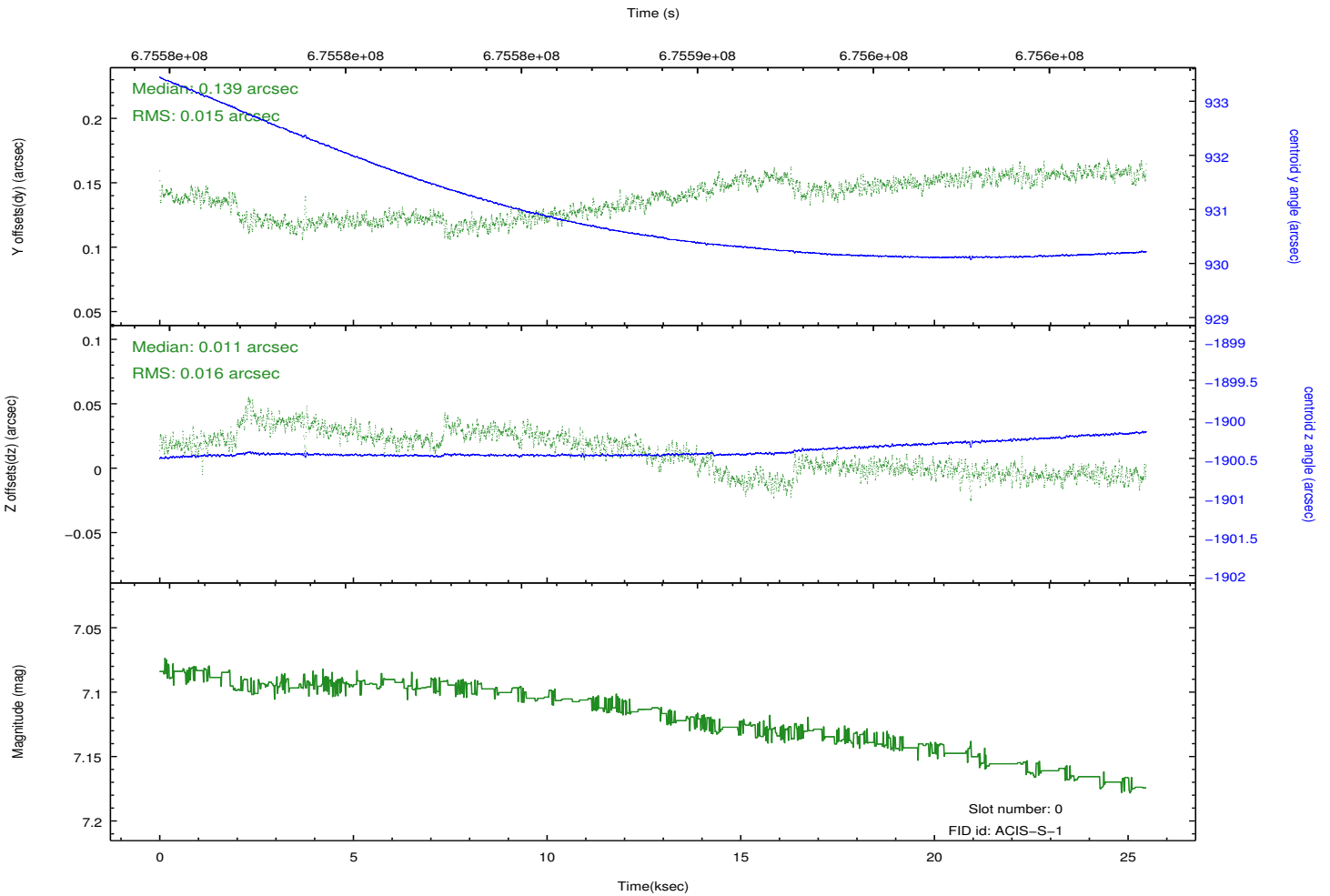
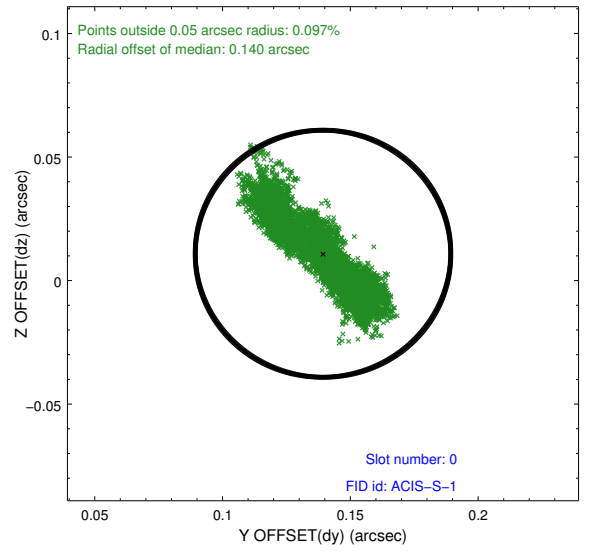
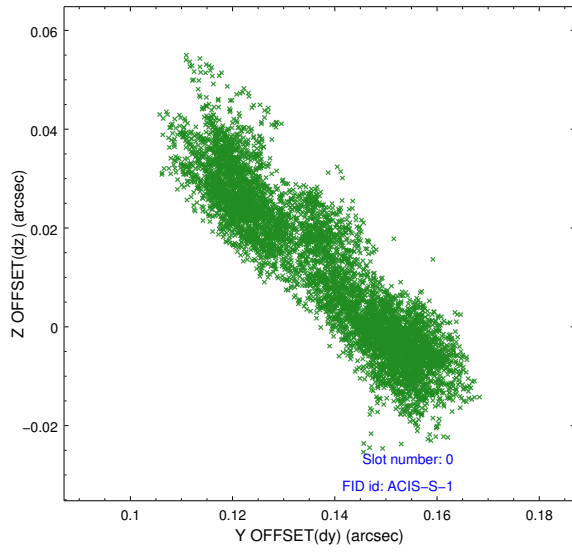


2.4.5 Slot 7

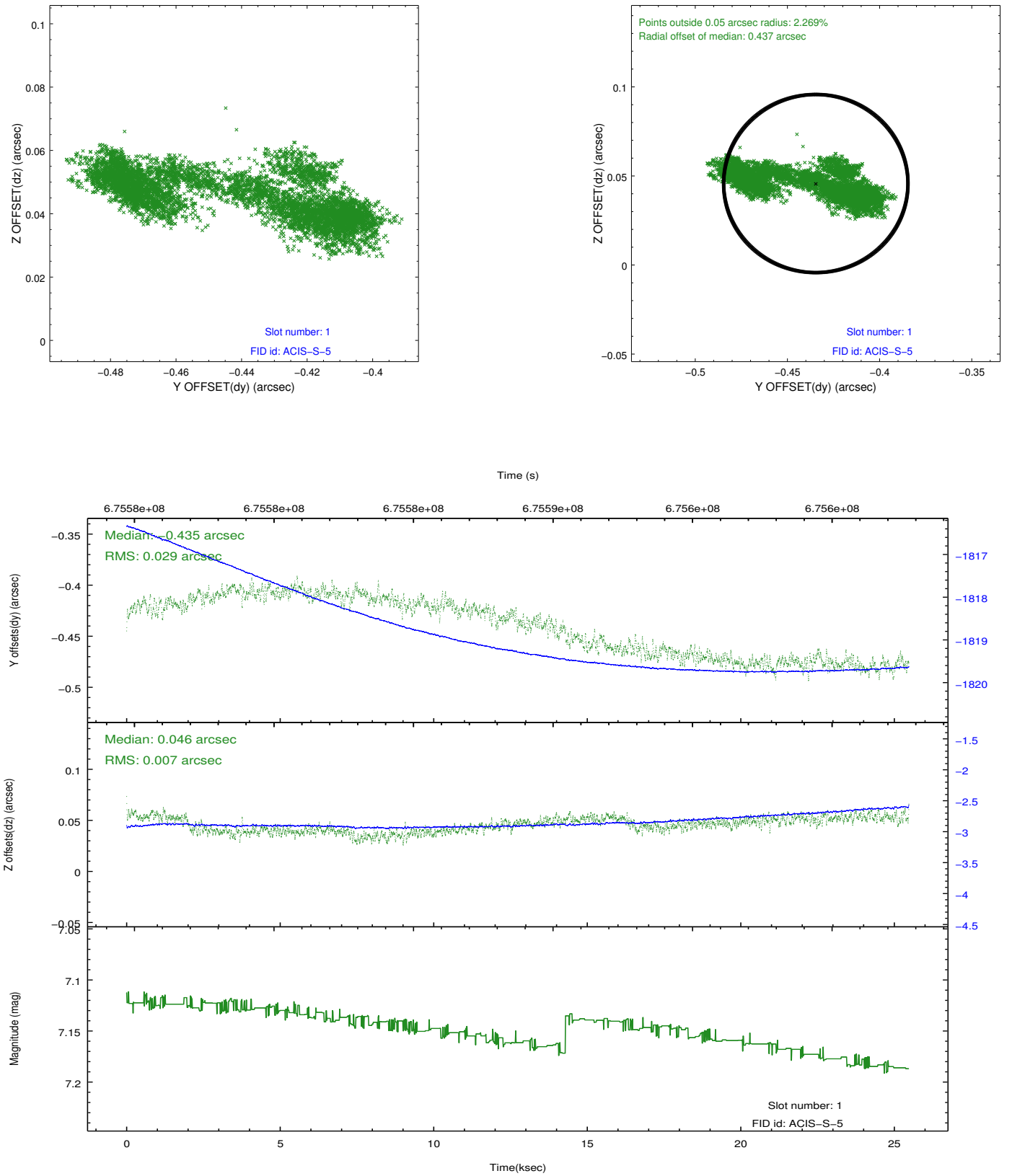


2.5 FID Slots

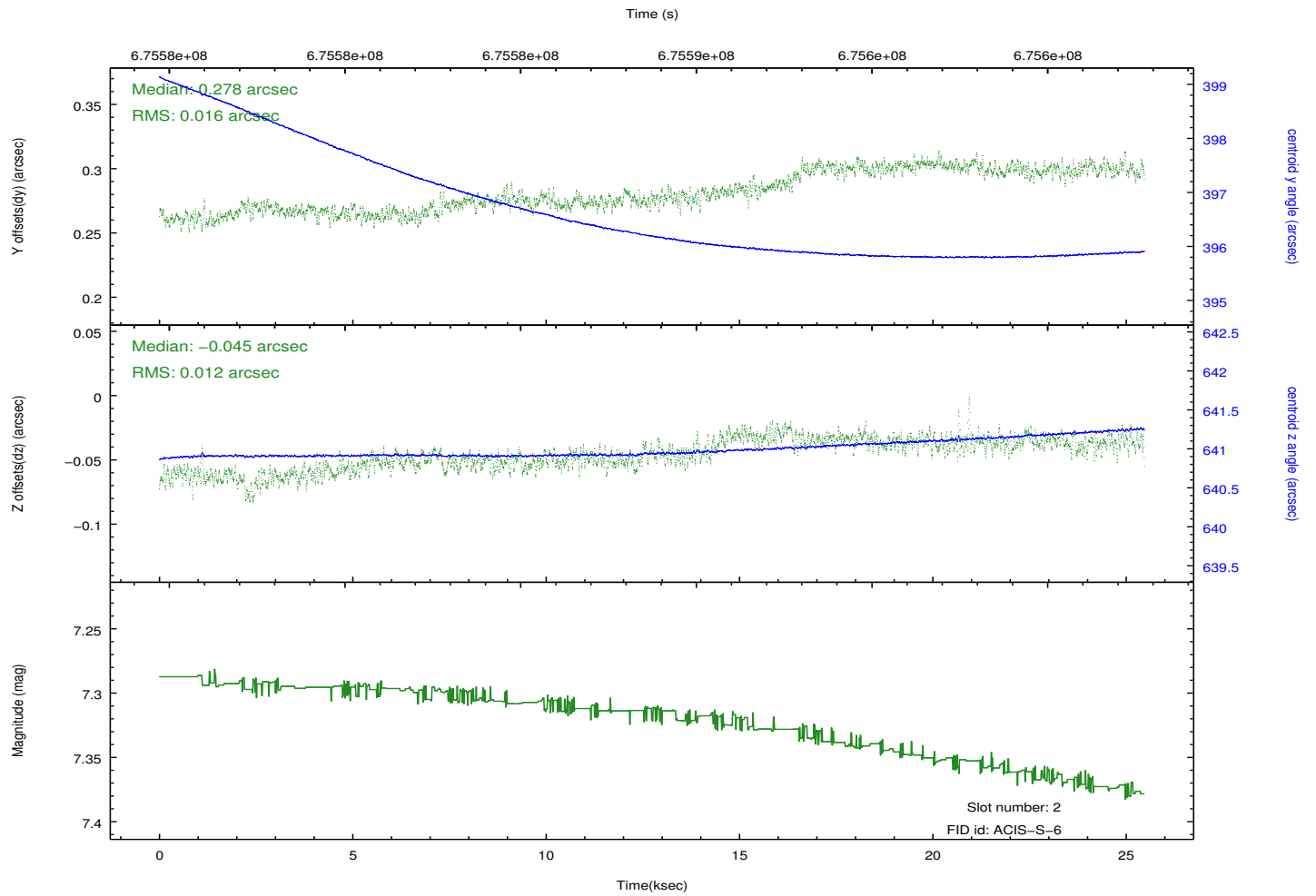
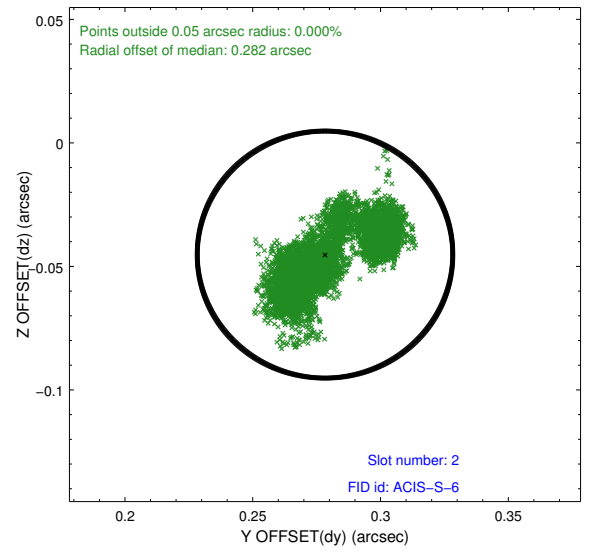
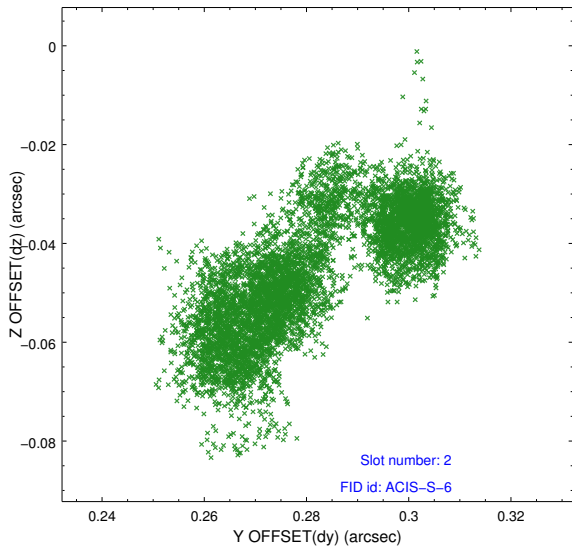
2.5.1 Slot 0



2.5.2 Slot 1

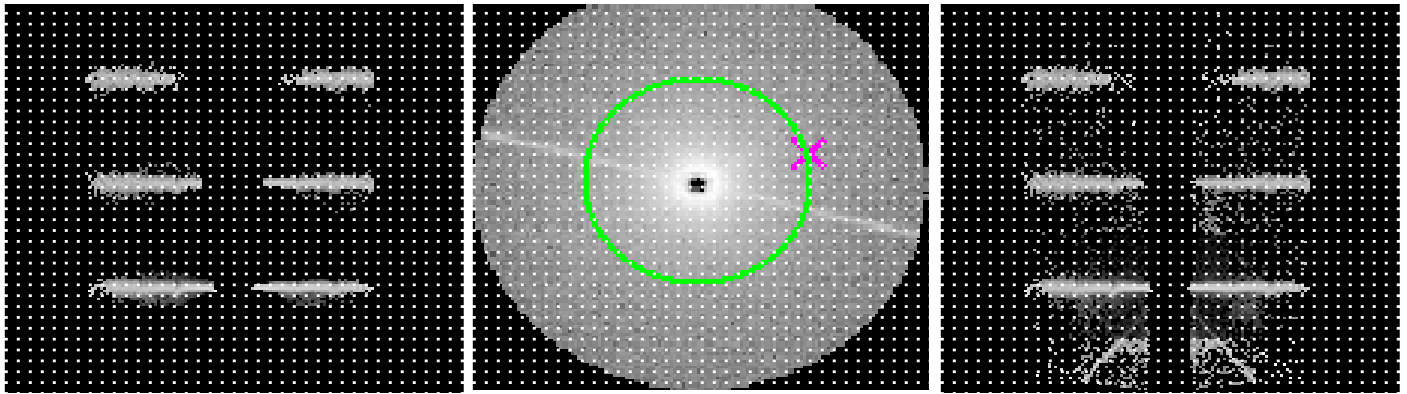


2.5.3 Slot 2



3 Gratings

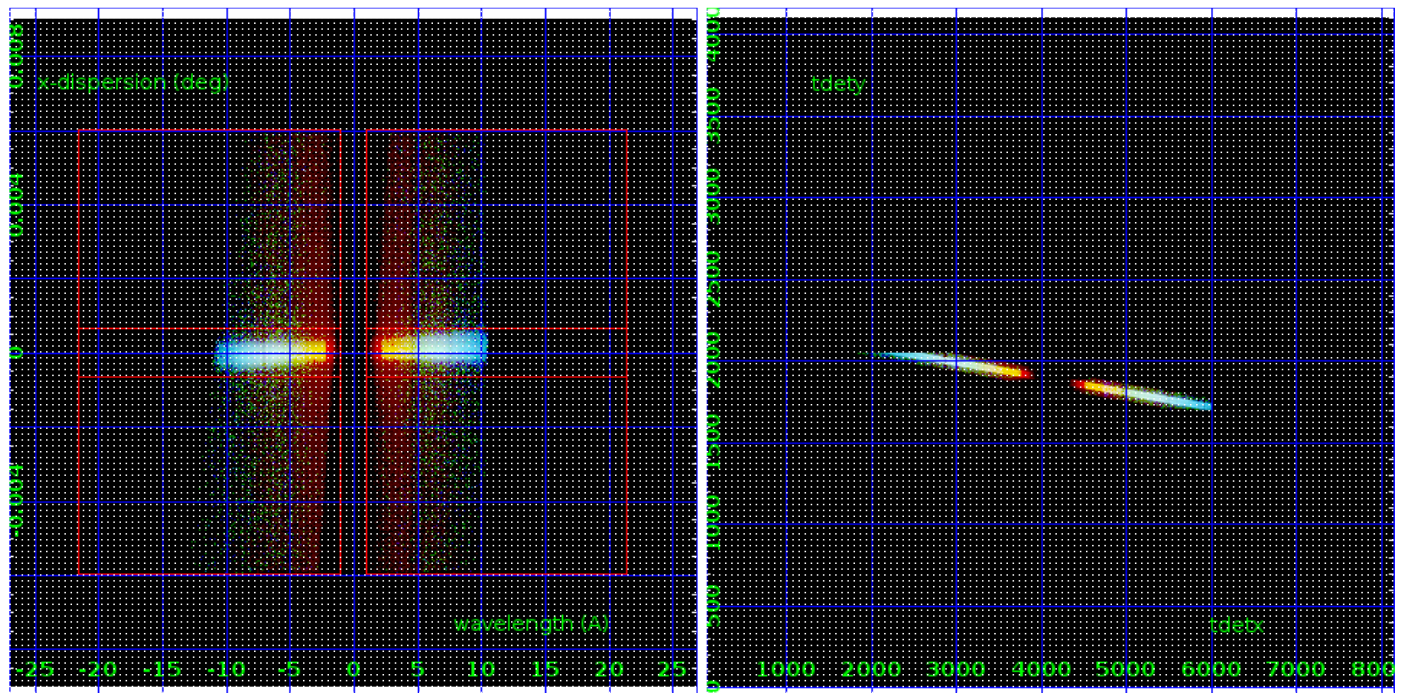
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

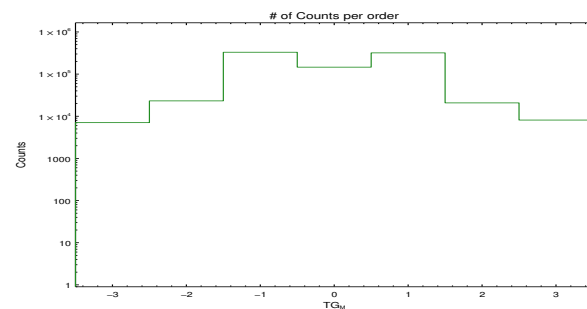
HEG Order Sort ALL

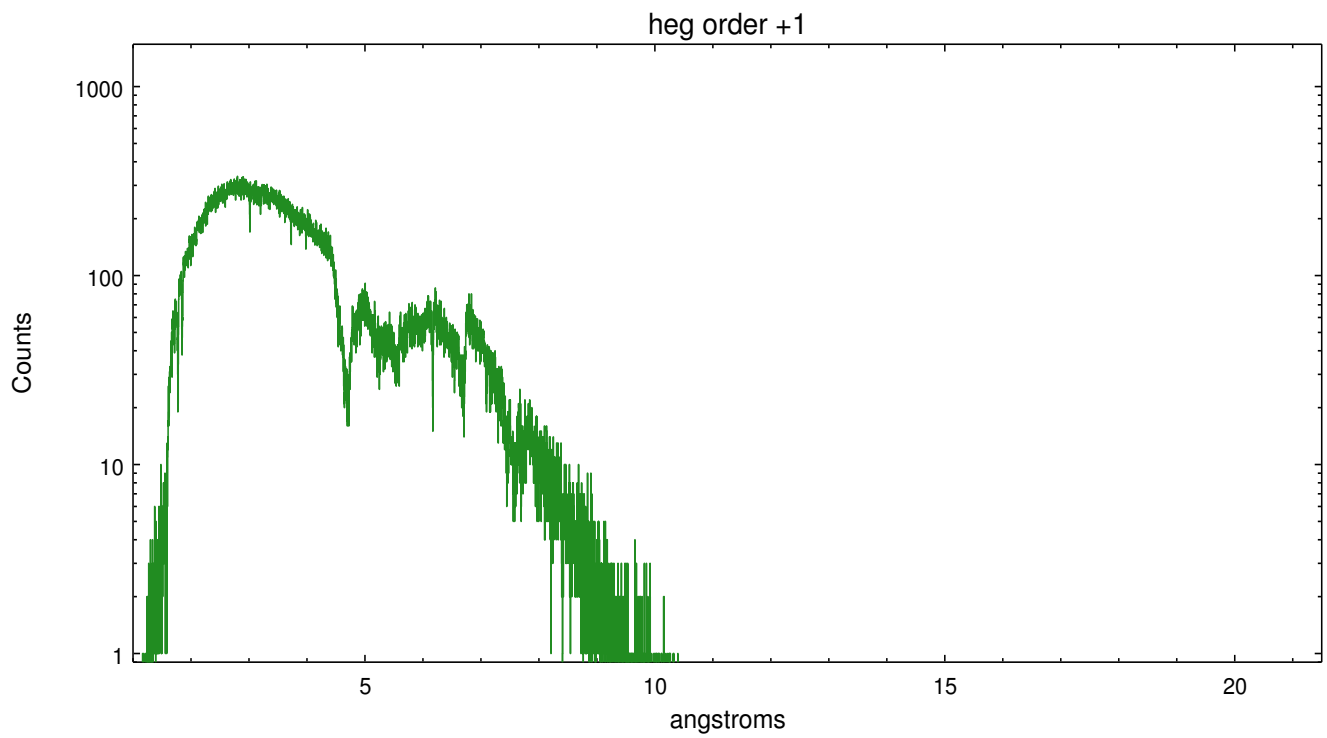
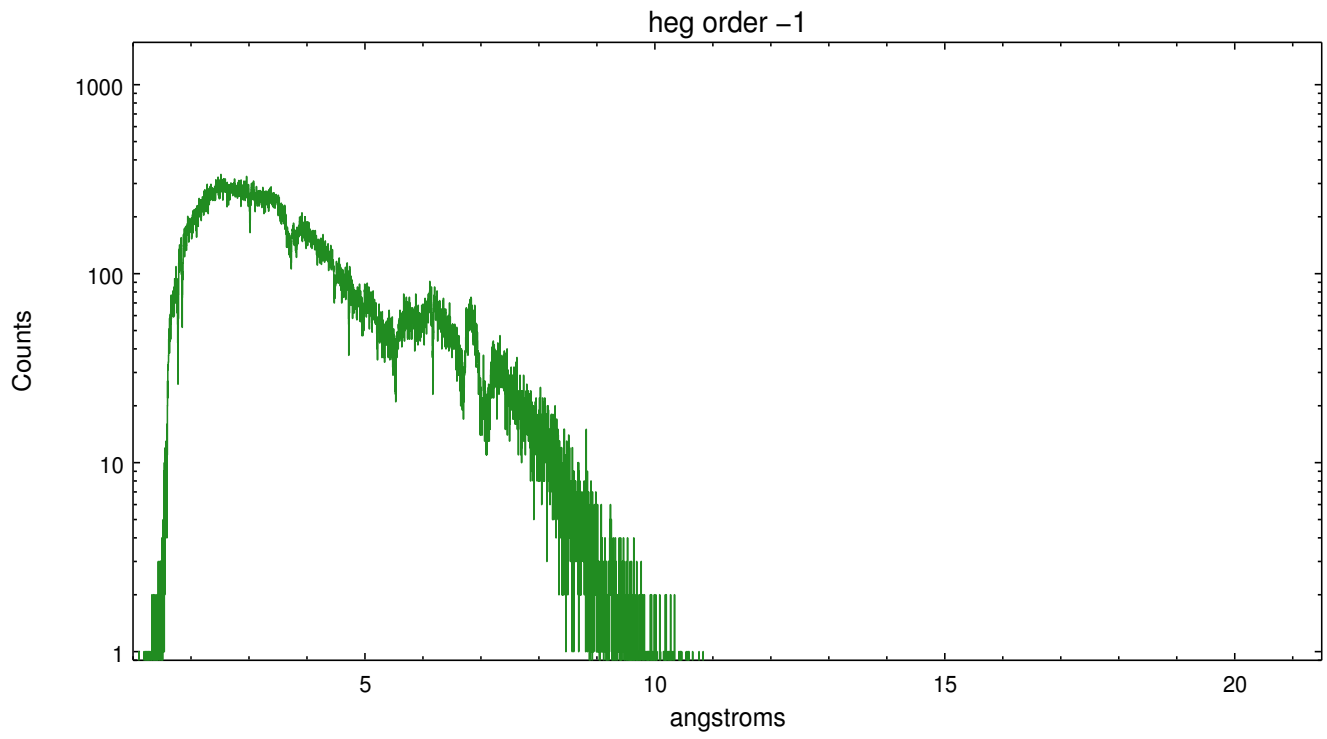


Spot Image HEG

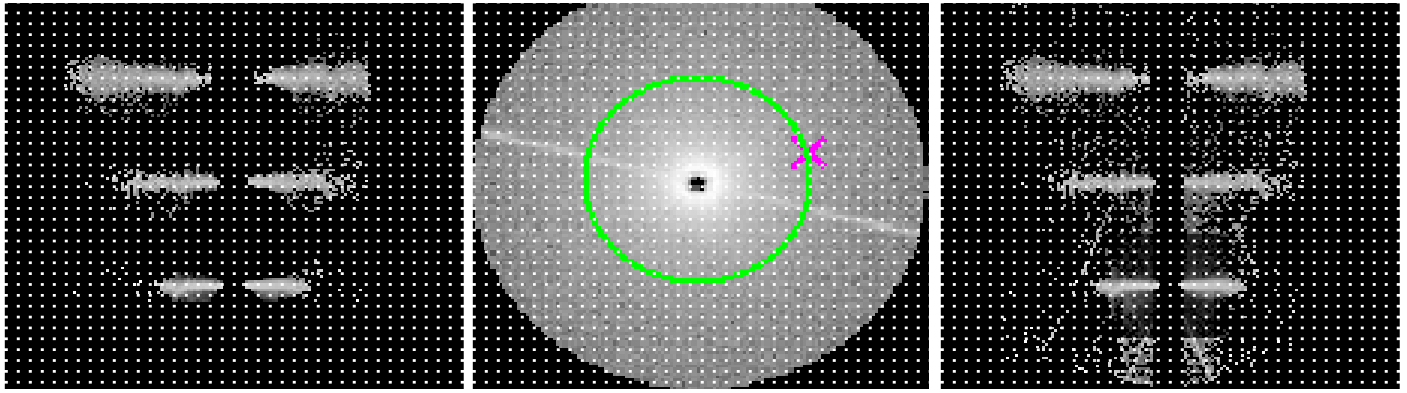
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	7063	23173	329979	146027	319041	20761	8121





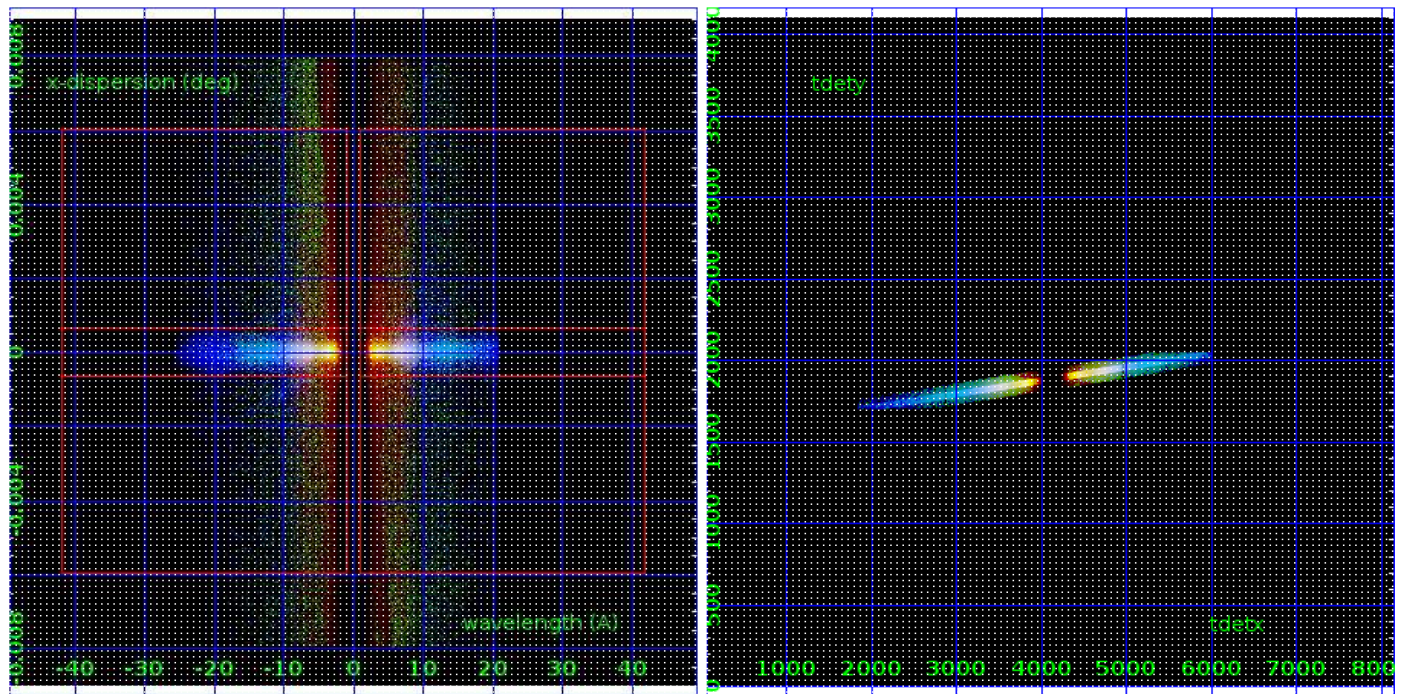
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

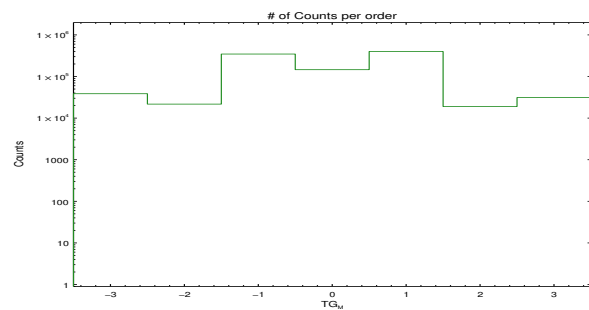
MEG Order Sort ALL



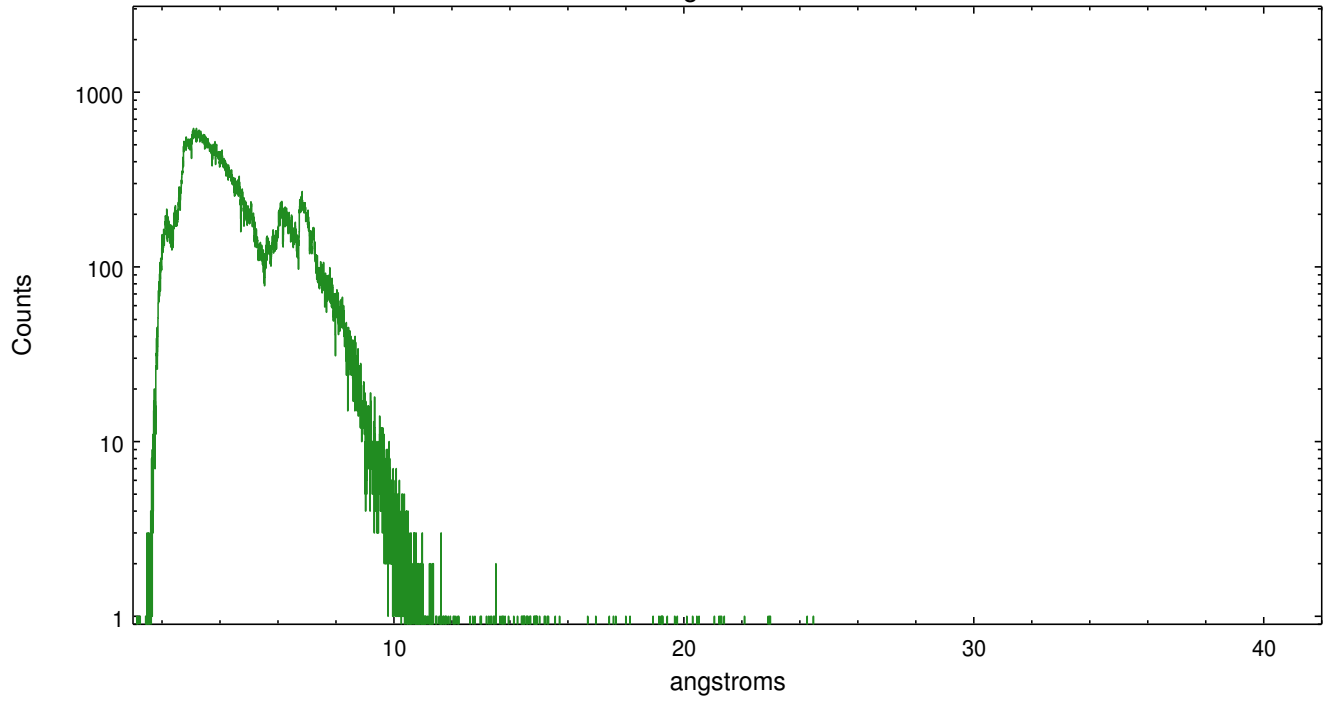
Spot Image MEG

Full Detector MEG

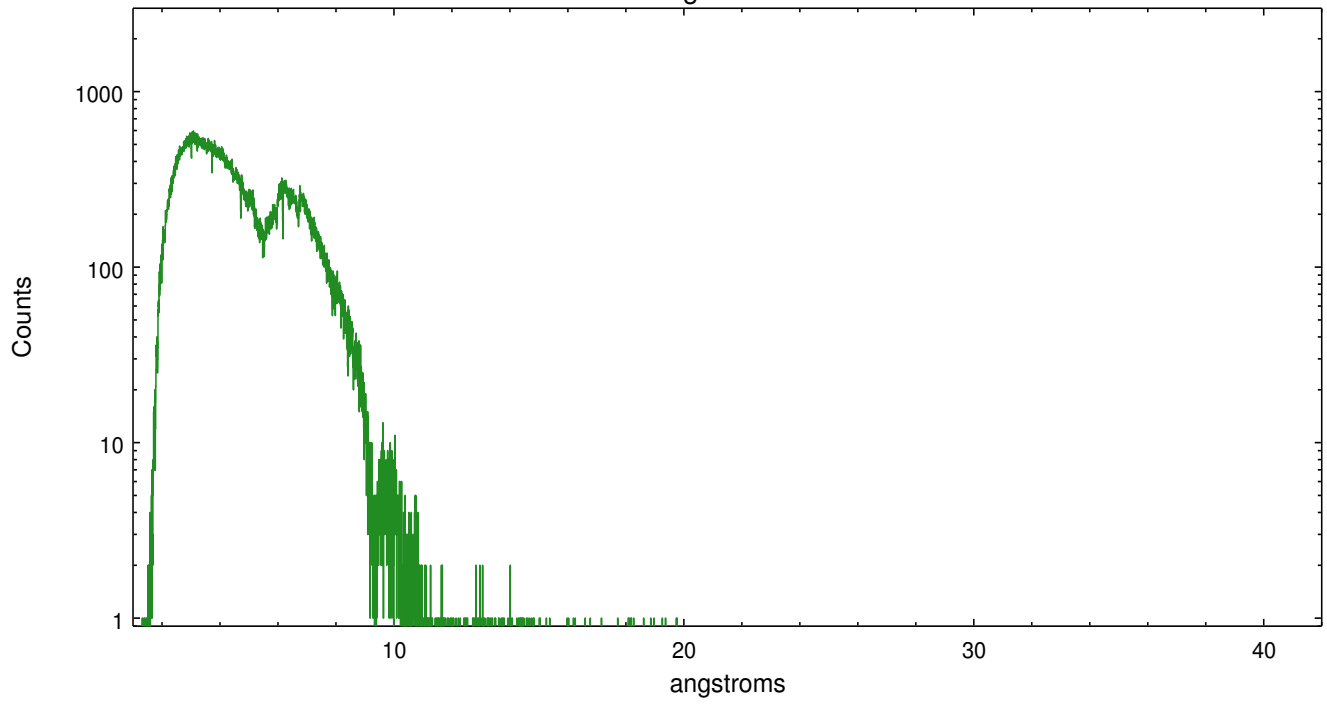
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	38618	21689	346712	146027	398973	18985	31157



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2019.08.12
V&V Edition	3
V&V Disposition and Status	OK
V&V Charge Time	25.4025098

A.2 Comments

Bias file for chip 5 has an enhanced artifact on node 1, rows 311-349, that shows larger differences in pixel values from the mean than is normally seen. However, since this is an instrumental effect, it is not possible to substantially improve the data by replacing that part of the bias file with a similar one.